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Notes on a remarkable variety of **PAPILIO TURNUS**, and descriptions of
two species of **DIURNAL LEPIDOPTERA**.

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Notes on Papilio Turnus.

I have lately received (Sept. 1, 1868,) from a young friend in this neighborhood a newly taken specimen of *Turnus*, one-half of which is black (*Glaucus*), the other yellow (*Turnus*), the dividing line passing down the middle of the body. By the conspicuous blue spots upon the margin of the yellow side, evidently that side represents the yellow female, not the male, which would remove it from the class of hermaphrodites. In this region both the black and yellow females of *Turnus* are abundant, and are perhaps about equal in number. I have several times seen the black variety mottled over the whole surface, partly yellow, partly black, in irregular patches.

MELITÆA MARCIA, n. sp.

Male. Expands 1.3 to 1.5 inch.

Upper side fulvous: primaries have a broad black band extending along the hind margin and around the apex upon the costa, one-half the length of the latter, and divided by a fulvous sinus beyond the cell that reaches nearly to the costal edge; this marginal band encloses on its inner side, below the middle, one or two fulvous spots which are sometimes lunular but often irregular, and which form part of a series running along the whole margin, occasionally seen with distinctness but generally more or less obsolete; costal edge black; across the outer limb, parallel with the inner edge of the marginal band, a crenated line, sometimes obsolete, but often conspicuous and in such case cutting off a submarginal series of fulvous lunules; a black patch on middle of inner margin.

Secondaries have a broad black hind margin, through which runs a greyish-white crenated line from one angle to the other; a submarginal series of six rounded black spots, minute towards outer angle; above these a line more or less distinct expanded on costal margin into a long triangular patch; base of both wings reticulated with black lines between which some of the spaces are filled in with black, but by no means so densely covered as in *Batesii*; fringes greyish, cut with black at tips of nervules.

Under side of primaries pale fulvous, inclining to yellow on the costa and hind margin; an irregular black patch on middle of costa, another near apex, a third within the inner angle and a fourth on middle of inner margin; a few indistinct lines near base caused by the transparency of the wing; apex yellow and a yellow patch on middle of hind margin; a marginal series of fine crenated brown lines, a second beyond that, distinct only at the apex.

Secondaries purple-grey (or pearly-grey in some specimens) over rather more than the basal third and broadly along hind margin, leaving between a submarginal band limited on either side by a delicate crenated brown line that crosses the entire wing; this band is yellowish, clouded at the costal edge and in the middle by brown; a row of spots or points along the middle of the band, corresponding to the spots of upper surface, obsolete at outer extremity; hind margin bordered by a fine brown crenated line, above which is a second, (which is the outer edge of the submarginal band) the spaces between the two being lunular; at anal angle the purple shade gives place to yellowish; the middle crescents clouded by the brown shade that obscures the band; the basal portion of the wing reticulated with fine brown lines whereof the outer ones being most regular form a second band across the wing; next the base the lines are irregularly placed; towards costa and about the base the purple shade a little replaced with yellowish.

Body above black, covered with fulvous hairs; below white; palpi white; antennæ black above, whitish below; annulated with white; club black above, fulvous below.

Female. 1.7 inch; a shade paler than the male; similarly marked.

Found from New York to Louisiana, and hitherto considered as a variety of *Tharos*, from which it is readily distinguishable by the purple or pearly hue of the under side of secondaries. *Tharos* is one of our many species about which much confusion has existed, several distinct forms being by various authors considered to be included within the limits of this species. In 1864 I separated *M. Phaon*, (*Proc. Ent. Soc. Phila.*), and Mr. Reakirt has since described *Batræii*. To this may be added *Marcia*, above described.

Boisduval and Leconte in *Lep. d' Amer.* page 170, regard *Tharos* of Cramer, pl. 169, and *Tharos* of Drury, Vol. 1, pl. 20, as identical and describe and figure what they consider the type. The figure of the male and the description correspond, viz: "the under side (of secondaries) is of an ochrey-yellow with a great number of undulating ferruginous lines, a brown border that reaches neither angle, marked

by a yellow lunular spot." Subsequently they add, "we possess individuals which we regard as varieties, of which the upper wings are black with some fulvous spots and a transverse macular band of same color. Beneath, the inferior wings are entirely without the brown border; the superiors have likewise a part of the border wanting." This I believe to refer to *M. Batesii*, and the figure of the female in the plate seems to represent that species..

In his paper on the Lepidoptera of California in *Ann. Soc. Ent. de France*, 1852, Dr. Boisduval makes a distinction between *Tharos*, of Cramer and that of Drury, which he calls *Pulchella*, and erroneously says is to be found throughout California. Drury's figure represents the upper surface as nearly black, like *Batesii*, but gives the under side of secondaries as having a white crescent and russet markings, and therein differs from *Batesii*. In the text, evidently two or three species are confused, the description of upper side applying either to *Tharos* of Cramer or to *Batesii*, or to *Marcia*. The description of under side of primaries is applicable to either; of secondaries, it says, "very pale clay colors, with a cloud in the middle of the external edge of a reddish-brown, where (in some) is a silver crescent." This relates alone to *Tharos* as described in Boisduval and Leconte and referred to Cramer. Cramer's figure is not reliable and indeed is worthless, but as Boisduval has adopted his name and correctly figured and described one of the forms under it, it would not now be questioned. But the name of *Pulchella* is not specially applicable to any of our species, if Drury's figure and description is to guide us.

I have found *Marcia* common on the Kanawha River, W. Va., in June. *Batesii* is of earlier flight and rather rare in that region.

THECLA ONTARIO, n. sp.

Male. Expands 1.1 inch.

Upper side dark brown, color of *T. Acadica*; on costal margin of primaries a large smooth oval spot; secondaries have a single tail and a very slight projection at extremity of second median nervule, as in *Acalica*; from the base of the tail a faint white line extends along the margin to anal angle; at this angle a few scales of fulvous; between the first and second median nervules an indistinct marginal dark spot above which are a few fulvous scales in crescent form; tail black, tipped with white; fringe of both wings fuscous, next before the tail white, beyond it, black at extremity, white next the margin; secondaries more produced at anal angle and less rounded than *Acalica*.

Under side uniform light brown, color of *T. Calanus* (*fulacer* of

Godart and Harris); across the disk of primaries a nearly straight, narrow band of dark brown spots, very narrowly edged without by white; this band is continuous except that the two spots in the second and third median interspaces are slightly lunulate and separated; parallel to the margin is a second band of faint spots, of dark brown, nearly obsolete at each extremity; on the inner edge of the three or four middle and most distinct of these spots are a few white scales, scarcely noticeable without a glass.

Secondaries have a discal row of spots like those of primaries, but separated, forming a nearly straight line (the two middle spots only being outside the line) from the costa to a point just above the black space that surmounts the blue patch, then turning towards abdominal margin in a zigzag course forming the letter W, the last limb of which is the longer and reaches the extreme margin; hind margin edged by a fine whitish line and bordered by a row of spots occupying the interspaces, each of which is edged above with a curved black line on which is a second bluish-white; the four spots next apex almost obsolete, merely showing a darker tinge than the ground color, and on these the black crescents are not distinct and the white line is represented by a few scales only; the fifth spot a shade darker than the preceeding and edged above with a narrow patch of orange-red; the sixth is black with a broad red arch between it and the black line; beyond the tail a large patch of blue scales on a black ground which it does not wholly cover, leaving above the blue a small black spot on which are a few red scales; at the angle a rounded black spot narrowly edged above with white, between which and the black and white lines, which here are not crescent, is a red space.

Body above fuscous, beneath, abdomen ashy-brown, thorax blue-grey; legs white and black; palpi white tipped with black; antennæ annulated black and white; club black tipped with ferruginous.

From a single specimen taken by Mr. E. B. Reed, of London, Canada, at Port Stanley, Ontario, in July, 1868.

This species is allied to *T. humuli*, Harris, (*Hyperici* Bois. and Lec.), but differs in several respects; especially in the color of under surface, in the absence of a fulvous border to the discal lines in each wing, in the conspicuous blue patch and red and black submarginal crescents; the tails of *humuli* have twice the length also, the shorter of the two being twice as long as the longest in the present species, while in the latter the second tail is a mere point. A figure of *T. Ontario* will be given in the "Butterflies of North America."